

## Author index of Volume 113

Argyris, J. and L. Tenek, Linear and geometrically nonlinear bending of	
isotropic and mulitlayered composite plates by the natural mode method	207-251
Belytschko, T. and I. Leviathan, Physical stabilization of the 4-node shell	
element with one point quadrature	321-350
Belytschko, T., see Lu, Y.Y.	397-414
Dantzig, J.A., see Tortorelli, D.A.	141–155
Dantzig, J.A., see Tortorelli, D.A.	157-172
Droux, JJ. and T.J.R. Hughes, A boundary integral modification of the	10, 1,1
Galerkin least squares formulation for the Stokes problem	173-182
Galerkii least squares formulation for the Stokes problem	170 102
Edgar, N.B. and K.S. Surana, p-Version least squares finite element	
formulation for axisymmetric incompressible non-Newtonian fluid flow	271–300
Felippa, C.A., A survey of parametrized variational principles and applications	
to computational mechanics	109-140
Creek V and DM Dinely, Compley wave number dispersion analysis of	
Grosh, K. and P.M. Pinsky, Complex wave-number dispersion analysis of	67- 98
Galerkin and Galerkin least squares method for fluid-loaded plates	397-414
Gu, L., see Lu, Y.Y.	183-204
Guillard, H., see Nkonga, B.	163-204
Hauke, G. and T.J.R. Hughes, A unified approach to compressible and	
incompressible flows	389-395
Hughes, T.J.R., see Droux, JJ.	173–182
Hughes, T.J.R., see Johan, Z.	363-387
Hughes, T.J.R., see Hauke, G.	389-395
Hulbert, G.M., A unified set of single-step asymptotic annihilation algorithms	
for structural dynamics	1- 9
Johan, Z., K.K. Mathur, S.L. Johnsson and T.J.R. Hughes, An efficient	
communications strategy for finite element methods on the Connection	
Machine CM-5 system	363-387
Johnsson, S.L., see Johan, Z.	363-387
Lee, C.Y. and J.T. Oden, A posteriori error estimation of h-p finite element	44 45
approximations of frictional contact problems	11- 45
Leviathan, I., see Belytschko, T.	321–350
Lu, Y.Y., T. Belytschko and L. Gu, A new implementation of the element free	AOT 444
Galerkin method	397-414

Mathur, K.K., see Johan, Z.	363–38
Miehe, C., see Wriggers, P.	301-319
Morthland, T.E., see Tortorelli, D.A.	157-172
Nkonga, B. and H. Guillard, Godunov type method on non-structured meshes	
for three-dimensional moving boundary problems	183-204
Oden, J.T., see Lee, C.Y.	11- 45
Paramasivam, V. and D.M. Raj, Shear-deformable axisymmetric conical shell	45 5
element with 6-DOF and convergence of $O(h^4)$	47- 54
Pinsky, P.M., see Grosh, K.	67- 98
Pai D.M. saa Paramasiyam V	47- 54
Raj, D.M., see Paramasivam, V.	47- 3-
Sastri, V.M.K., see Srinivas Rao, M.S.S.	263-269
Semper, B., Numerical crosswind smear in the streamline diffusion method	99-108
Silva Neto, A.J. and R.E. White, Numerical control of the Stefan problem:	,, 100
Maximum melting	351-362
Srinivas Rao, M.S.S. and V.M.K. Sastri, Natural convection heat transfer in	331 302
	263-269
staggered vertical channels	203-209
Sui Yun-kang, The expansion of functions under transformation and its	253-262
application to optimization	
Surana, K.S., see Edgar, N.B.	271–300
Tenek, L., see Argyris, J.	207-251
Tiller, M.M., see Tortorelli, D.A.	141–155
Tomasko, J.A., see Tortorelli, D.A.	157-172
Tortorelli, D.A., M.M. Tiller and J.A. Dantzig, Optimal design of nonlinear	137 172
parabolic systems. Part I: Fixed spatial domain with applications to process	
optimization	141-155
	141-133
Tortorelli, D.A., J.A. Tomasko, T.E. Morthland and J.A. Dantzig, Optimal	
design of nonlinear parabolic systems. Part II: Variable spatial domain with	157 172
applications to casting optimization	157–172
White, R.E., see Silva Neto, A.J.	351-362
Wriggers, P. and C. Miehe, Contact constraints within coupled	
thermomechanical analysis—A finite element model	301-319
memoralical analysis 11 mile ciement model	301 017
Zhang, S., see Zhang, Z.	55- 65
Zhang, Z. and S. Zhang, Wilson's element for the Reissner-Mindlin plate	55- 65

## Subject index of Volume 113

## Calculus of variations A survey of parametrized variational principles and applications to computational mechanics, C.A. Felippa 109 - 140Coupled problems Complex wave-number dispersion analysis of Galerkin and Galerkin leastsquares methods for fluid-loaded plates, K. Grosh and P.M. Pinsky 67 - 98Natural convection heat transfer in staggered vertical channels, M.S.S. Srinivas Rao and V.M.K. Sastri 263-269 Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319 Design of programs Numerical control of the Stefan problem: Maximum melting, A.J. Silva Neto and R.E. White 351-362 **Dynamics** A unified set of single-step asymptotic annihilation algorithms for structural dynamics, G.M. Hulbert **Elasticity** A posteriori error estimation of h-p finite element approximations of frictional contact problems, C.Y. Lee and J.T. Oden 11 - 45Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207 - 251Finite difference methods Complex wave-number dispersion analysis of Galerkin and Galerkin leastsquares methods for fluid-loaded plates, K. Grosh and P.M. Pinsky 67 - 9899 - 108Numerical crosswind smear in the streamline diffusion method, B. Semper Godunov type method on non-structured meshes for three-dimensional moving 183 - 204boundary problems, B. Nkonga and H. Guillard Natural convection heat transfer in staggered vertical channels, M.S.S. Srinivas Rao and V.M.K. Sastri 263-269 Finite element and matrix methods A posteriori error estimation of h-p finite element approximations of frictional contact problems, C.Y. Lee and J.T. Oden 11 - 45Shear-deformable axisymmetric conical shell element with 6-DOF and 47- 54 convergence of $O(h^4)$ , V. Paramasivam and D.M. Raj 55 - 65Wilson's element for the Reissner-Mindlin plate, Z. Zhang and S. Zhang Complex wave-number dispersion analysis of Galerkin and Galerkin least-67 - 98

squares methods for fluid-loaded plates, K. Grosh and P.M. Pinsky

Numerical crosswind smear in the streamline diffusion method, B. Semper	99-108
A survey of parametrized variational principles and applications to	109-140
computational mechanics, C.A. Felippa Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain	109-140
with applications to process optimization, D.A. Tortorelli, M.M. Tiller and	
J.A. Dantzig	141-155
Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain	
with applications to casting optimization, D.A. Tortorelli, J.A. Tomasko,	
T.E. Morthland and J.A. Dantzig	157-172
A boundary integral modification of the Galerkin least squares formulation for the Stokes problem, JJ. Droux and T.J.R. Hughes	
	173–182
Linear and geometrically nonlinear bending of isotropic and multilayered	207 254
composite plates by the natural mode method, J. Argyris and L. Tenek	207–251
p-Version least squares finite element formulation for axisymmetric	271 200
incompressible non-Newtonian fluid flow, N.B. Edgar and K.S. Surana	271–300
Contact constraints within coupled thermomechanical analysis—A finite	301-319
element model, P. Wriggers and C. Miehe Physical stabilization of the 4-node shell element with one point quadrature, T.	301-319
Belytschko and I. Leviathan	321-350
An efficient communications strategy for finite element methods on the	321 330
Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson	
and T.J.R. Hughes	363-387
A unified approach to compressible and incompressible flows, G. Hauke and	
T.J.R. Hughes	389-395
A new implementation of the element free Galerkin method, Y.Y. Lu, T.	
Belytschko and L. Gu	397-414
Fluid mechanics	
Numerical crosswind smear in the streamline diffusion method, B. Semper	9-108
A boundary integral modification of the Galerkin least squares formulation for	
the Stokes problem, JJ. Droux and T.J.R. Hughes	173–182
Godunov type method on non-structured meshes for three-dimensional moving	102 204
boundary problems, B. Nkonga and H. Guillard	183–204
A unified approach to compressible and incompressible flows, G. Hauke and	389-395
T.J.R. Hughes  An efficient communications strategy for finite element methods on the	369-393
Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson	
and T.J.R. Hughes	363-387
and 1.3.R. Hughes	303 307
Gas dynamics	
An efficient communications strategy for finite element methods on the	
Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson	
and T.J.R. Hughes	363-387
A unified approach to compressible and incompressible flows, G. Hauke and	
T.J.R. Hughes	389–395
General Rayleigh–Ritz and Galerkin techniques	
A unified approach to compressible and incompressible flows, G. Hauke and	
T.J.R. Hughes	389-395
A new implementation of the element free Galerkin method, Y.Y. Lu, T.	
Belytschko and L. Gu	397-414

Heat and diffusion	
Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain with applications to process optimization, D.A. Tortorelli, M.M. Tiller and	141 151
J.A. Dantzig Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain	141–155
with applications to casting optimization, D.A. Tortorelli, J.A. Tomasko,	
T.E. Morthland and J.A. Dantzig	157-172
Natural convection heat transfer in staggered vertical channels, M.S.S. Srinivas	
Rao and V.M.K. Sastri	263-269
Numerical control of the Stefan problem: Maximum melting, A.J. Silva Neto	251 260
and R.E. White	351–362
Incompressible and near incompressible media	
A boundary integral modification of the Galerkin least squares formulation for	
the Stokes problem, JJ. Droux and T.J.R. Hughes	173–182
p-Version least squares finite element formulation for axisymmetric	271 200
incompressible non-Newtonian fluid flow, N.B. Edgar and K.S. Surana A unified approach to compressible and incompressible flows, G. Hauke and	271–300
T.J.R. Hughes	389-395
Modern computer architecture	
An efficient communications strategy for finite element methods on the	
Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.I.P. Hughes	363-387
and T.J.R. Hughes	303-367
Nonlinear mechanics	
A posteriori error estimation of $h$ - $p$ finite element approximations of frictional	
contact problems, C.Y. Lee and J.T. Oden	11- 45
Linear and geometrically nonlinear bending of isotropic and multilayered	207-251
composite plates by the natural mode method, J. Argyris and L. Tenek Contact constraints within coupled thermomechanical analysis—A finite	207-231
element model, P. Wriggers and C. Miehe	301-319
Numerical solution procedures	
A unified set of single-step asymptotic annihilation algorithms for structural	1- 9
dynamics, G.M. Hulbert Godunov type method on non-structured meshes for three-dimensional moving	1- 9
boundary problems, B. Nkonga and H. Guillard	183-204
Linear and geometrically nonlinear bending of isotropic and multilayered	
composite plates by the natural mode method, J. Argyris and L. Tenek	207-251
Contact constraints within coupled thermomechanical analysis—A finite	201 210
element model, P. Wriggers and C. Miehe Physical stabilization of the 4-node shell element with one point quadrature, T.	301–319
Belytschko and I. Leviathan	321-350
A new implementation of the element free Galerkin method, Y.Y. Lu, T.	
Belytschko and L. Gu	397-414
Optimization Optimal design of poplinear parabolic systems. Part I: Fixed spatial domain	
Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain with applications to process optimization, D.A. Tortorelli, M.M. Tiller and	
J.A. Dantzig	141-155
Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain	
with applications to casting optimization, D.A. Tortorelli, J.A. Tomasko,	4 4
T.E. Morthland and J.A. Dantzig	157–172

Optimization and design of structures  The expansion of functions under transformation and its application to optimization, Sui Yun-kang	253–262
Phase changes Numerical control of the Stefan problem: Maximum melting, A.J. Silva Neto and R.E. White	351-362
Plasticity Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe	301-319
Shells and plates Shear-deformable axisymmetric conical shell element with 6-DOF and convergence of O(h <sup>4</sup> ), V. Paramasivam and D.M. Raj Wilson's element for the Reissner-Mindlin plate, Z. Zhang and S. Zhang Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek Physical stabilization of the 4-node shell element with one point quadrature, T. Belytschko and I. Leviathan	47- 54 55- 65 207-251 321-350
Structural mechanics  A unified set of single-step asymptotic annihilation algorithms for structural dynamics, G.M. Hulbert  Shear-deformable axisymmetric conical shell element with 6-DOF and convergence of O(h <sup>4</sup> ), V. Paramasivam and D.M. Raj  Wilson's element for the Reissner-Mindlin plate, Z. Zhang and S. Zhang  Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek  A new implementation of the element free Galerkin method, Y.Y. Lu, T. Belytschko and L. Gu	1- 9 47- 54 55- 65 207-251 397-414
Subsonic flow  p-Version least squares finite element formulation for axisymmetric incompressible non-Newtonian fluid flow, N.B. Edgar and K.S. Surana	271-300
Supersonic flow An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes  Thermal effects and thermodynamics Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe	363–387 301–319
Transonic flow An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes	363–387
Viscous flow A boundary integral modification of the Galerkin least squares formulation for the Stokes problem, JJ. Droux and T.J.R. Hughes A unified approach to compressible and incompressible flows, G. Hauke and	173–182
T.J.R. Hughes	389-395

